

- optionally deaeration,
- pouring the mixture in a mould for casting a tube-like structure,
- controlling the temperature in a range of from 40°C to 90°C,

after formation of the polymer, removing porogens unreacted monomers and initiators or by-products.

REMARKS

Claims 21-42, presented hereby, are pending.

Claims 21, 22, and 26-42 contain the subject matter of claims 1, 2, and 4-20, respectively.

Claims 23, 24, and 25 contain the subject matter of original claim 3.

Claim 21 represents claim 1 revised to more clearly define the "structure" as a "tube," i.e., "a tube having at least two porous components A and B," as described in the specification at pages 5-6.

Claims 3 and 11 were rejected under 35 USC 112, ¶2, for allegedly being indefinite. Reconsideration is requested.

The terms "such as" and "preferably" are not found in the present claims. Subject matter associated with these terms in claim 3 has been made the subject of new dependent claims 24 and 25. Antecedent basis is properly established for "the chromatographic unit" appearing in claim 35 (corresponding to original claim 11).

Reconsideration is requested with respect to the rejections of record under 35 USC 103(a) and under 35 USC 102(b), which are alternatively under 35 USC 103(a).

The rejections of record under §103(a) are applied against claims 1-20 based on the combined teachings of Josic, Frechet, and Afeyan, solely, and in combination with other cited references. The rejections under §102(b) or alternatively under §103(a) are based on each of Saxena, applied against claim 18, and Litle, applied against claims 17 and 19. Reconsideration of the prior art rejections, i.e., under §102(b) and 103(a), is requested.

Applicants submit that none of the cited references, taken alone or in combination, teaches or suggests the "self-supporting structure" of present independent claim 21:

- a column-like system with a channel running through the entire system ("a tube")
- made up of at least two porous units ("porous components A and B"),
- one unit inside the other ("porous component B embraces the porous component A");

thus, effecting a self-supporting, tube-inside-a-tube structure, i.e., two porous, coaxially arranged tubes, friction fit to be *self-supporting*.

With respect to the §103(a) rejections based on the combined teachings of Josic, Frechet, and Afeyan, solely or in combination with other cited references. Frechet (US 5,728,457) discloses a porous polymeric matrix in the form of an integral body. This integral body has a property gradient, which can be either the matrix pore size distribution or chemical composition, or both.

The integral body of Frechet is referred to as a *plug* or *plug body*, exemplified in form of "a cylindrical plug for use in a chromatographic column" (Frechet column 6, lines 28-29). This plug

is not a *tube*, i.e., "a hollow cylindrical body or passage" (online *Harcourt: AP Dictionary of Science and Technology*, copy attached, hereto). Thus, the structure disclosed in the reference fails to meet the overall hollow structure ("tube"), made up of at least two, self-supporting and coaxially arranged porous tubes, presently claimed.

Afeyan (US 5,019,270) and Josic (WO 96/06158) also do not teach or suggest self-supporting and coaxially arranged porous tubes, as presently claimed.

From the teachings of Josic, Frechet, and Afeyan, each taken alone or in combination with one another, one skilled in the art would not have gotten any incentive to assemble porous tubes in a coaxial arrangement that forms an overall "tube" structure, as presently claimed. None of the other secondary references cited cures the fatal deficiencies of the Josic, Frechet, and Afeyan references.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). When conducting an obviousness analysis, "all limitations of a claim must be considered in determining the claimed subject matter as is referred to in 35 U.S.C. 103 and it is error to ignore specific limitations distinguishing over the [prior art] reference." *Ex parte Murphy*, 217 USPQ 479, 481 (PO Bd. App. 1982)

In the present case, none of the cited references, taken alone or in combination, teaches or suggests the overall "tube" structure limitation of the presently claimed invention, nor do the

references teach or suggest effecting the tube structure by coaxially arranging porous tubes in a self-supporting manner, as presently claimed. Limitations on the present claims being neither taught nor suggested in any of the cited references, obviousness of the present claims is not shown, *Royka, supra*, and withdrawal of the rejections at issue under §103(a) is in order.

Considering the rejections alternatively under §102(b) and §103(a), based on each of Little and Saxena, neither reference teaches or suggests the overall "tube" structure limitation of the presently claimed invention, effecting the tube structure by coaxially arranging porous tubes in a self-supporting manner, in which the outer tube embraces the inner tube, as presently claimed.

For anticipation under § 102 to exist, each and every claim limitation, as arranged in the claim, must be found in a single prior art reference. *Jamesbury Corp. v. Litton Industrial Products, Inc.*, 225 USPQ 253 (Fed. Cir. 1985). The absence from a prior art reference of a single claim limitation negates anticipation. *Kolster Speedsteel A B v. Crucible Inc.*, 230 USPQ 81 (Fed. Cir. 1986). A reference that discloses "substantially the same invention" is not an anticipation. *Jamesbury Corp.* To anticipate the claim, each claim limitation must "*identically* appear" in the reference disclosure. *Gechter v. Davidson*, 43 USPQ2d 1030, 1032 (Fed. Cir. 1997) (*emphasis added*). To be novelty defeating, a reference must put the public in possession of the identical invention claimed. *In re Donahue*, 226 USPQ 619 (Fed. Cir. 1985).

Little discloses a dialyzer apparatus comprising, as illustrated in Figures 2 and 3, coaxially arranged (1) housing 46, (2) O-rings 54 and 56, (3) cylindrical dialysis membrane 52, and (4) core 50, the O-rings 54 and 56 securing the membrane 52 to the core 50.

The dialyzer of Litle is patentably distinguishable from the presently claimed invention in at least two aspects. First, the dialyzer does not have an overall tube structure; as illustrated in Litle Fig. 2, there is no cavity (i.e., lumen) running through the core 50 from end to end. Secondly, the dialyzer of Litle is not made up of at least two coaxially arranged porous tubes, as presently claimed.

Since at least two limitations on the present claims are absent from Litle, anticipation is negated, *Kolster Speedsteel AB, supra*, and withdrawal of the rejection under Section 102(b) based on Litle is in order.

Saxena discloses, as shown in Fig. 1, two porous frits 13 and 16, which are coaxially arranged. Inner porous frit 16 is separated from outer porous frit 13 by chromatographic packing material 22. Since the porous frits 13 and 16 are separated by chromatographic material 22, the Saxena device fails to meet the presently recited claim limitation "the porous component B *embraces* the porous component A" (*emphasis added*). Since a limitation on the present claims is absent from the reference, anticipation is negated, *Kolster Speedsteel AB, supra*, and withdrawal of the rejection under 35 U.S.C. 102(b) based on Saxena is in order.

With respect to the alternative rejections under Section 103(a) based on each of Litle and Saxena, the statements of rejection allege "if a difference exists between the claims and [the reference], it would reside in optimizing the elements . . . [and it] would have been obvious to optimize the elements of [the reference] to enhance separation" (Office Action, page 5). First of all, a rejection under Section 103(a) based on mere allegations of optimization cannot be maintained. That a difference with the prior art amounts to an alleged "optimal condition . . . is not a substitute

for some teaching or suggestion supporting an obviousness rejection." *In re Rijckaert*, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

Secondly, the alternative rejections under Section 103(a) cannot be maintained for the same reasons that the corresponding rejections under Section 102(b) cannot be maintained. As explained above, limitations on the present claims are neither taught nor suggested in either Litle or Saxena. Accordingly, obviousness based on either of the references is not shown, *Royka, supra*, and withdrawal of the rejections under Section 103(a) based on each of Litle and Saxena is in order.

Request for Acknowledgment of Priority Under 35 USC 119

A claim to priority under 35 USC 119 based on SI 9800058, filed February 27, 1998, has been made (inventorship declaration, filed July 26, 2000) and the certified copy of the priority document received by the PTO (Notification of Acceptance, mailed August 17, 2000; Form PCT/IB304, mailed 9 July 1999). The present Office Action acknowledges neither the claim to priority nor receipt of the certified copy.

Accordingly, Applicants request that the Examiner mark the next Office Action to acknowledge, both, the claim to §119 priority based on SI 9800058 and receipt of the certified copy.

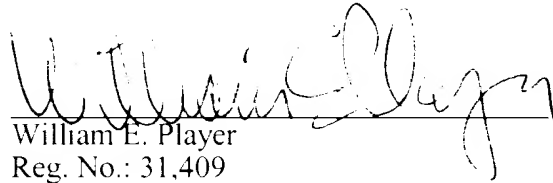
Atty. Dkt. No. P65728US0
Serial No. 09/601,037

Favorable action is requested.

Respectfully submitted,

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